

### Abstract

The present invention provides a catalyst comprising

(A) a tantalum compound, and

(B) an organic metal compound, wherein the organic metal

5 compound (B) comprises at least one group selected from the group consisting of the following (1) to (5):

(1) a branched or cycloalkyl-substituted primary alkyl group having 4 to 15 carbon atoms,

10 (2) an aryl-substituted primary alkyl group having 7 to 15 carbon atoms,

(3) a 3-alkenyl group having 4 to 15 carbon atoms,

(4) a secondary alkyl group having 3 to 15 carbon atoms which may be substituted with an aryl group or a cyclic alkyl group having 3 to 15 carbon atoms, and

15 (5) a secondary alkenyl group having 4 to 15 carbon atoms, the catalyst showing good olefin trimerizing activity.